



AFRINIC
The Internet Numbers Registry for Africa



AFRINIC GLOBAL UPDATE

 www.afrinic.net  blog.afrinic.net     /afrinic

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AGENDA

Internet Ecosystem

AFRINIC Ltd.

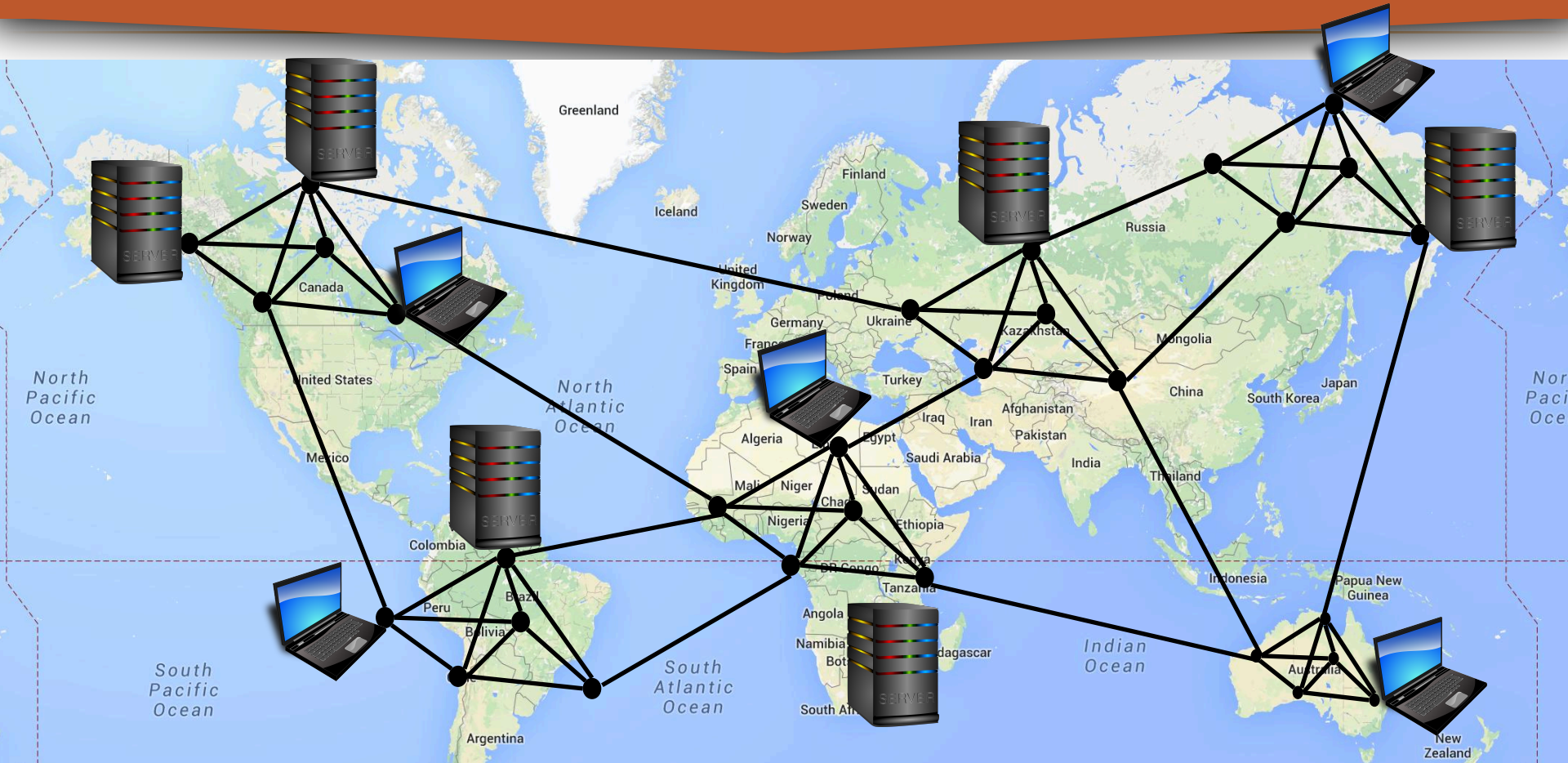
AFRINIC's Initiatives

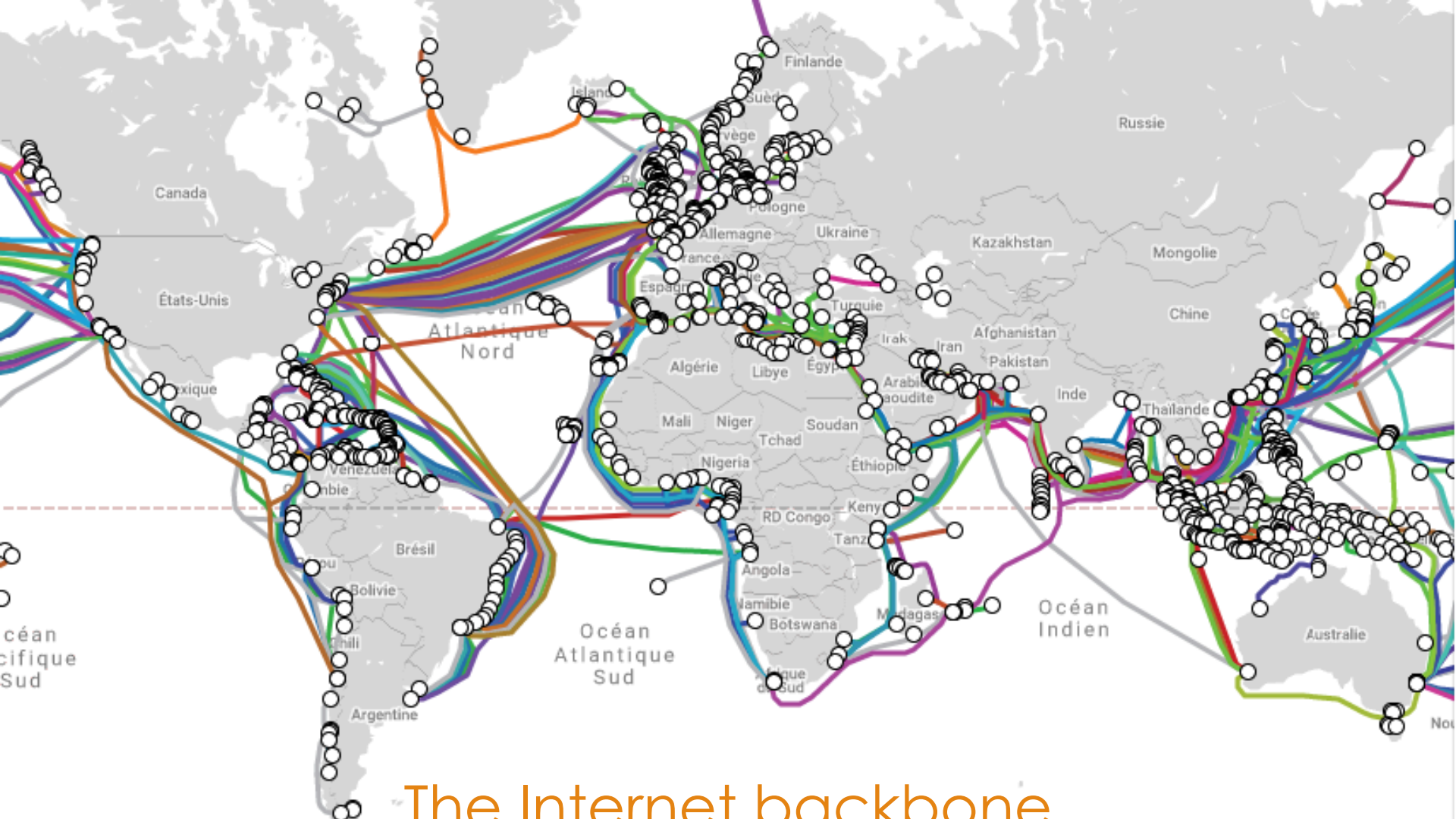


Internet Elements

- Backbone
- Numbered resources
- The DNS

What is Internet?



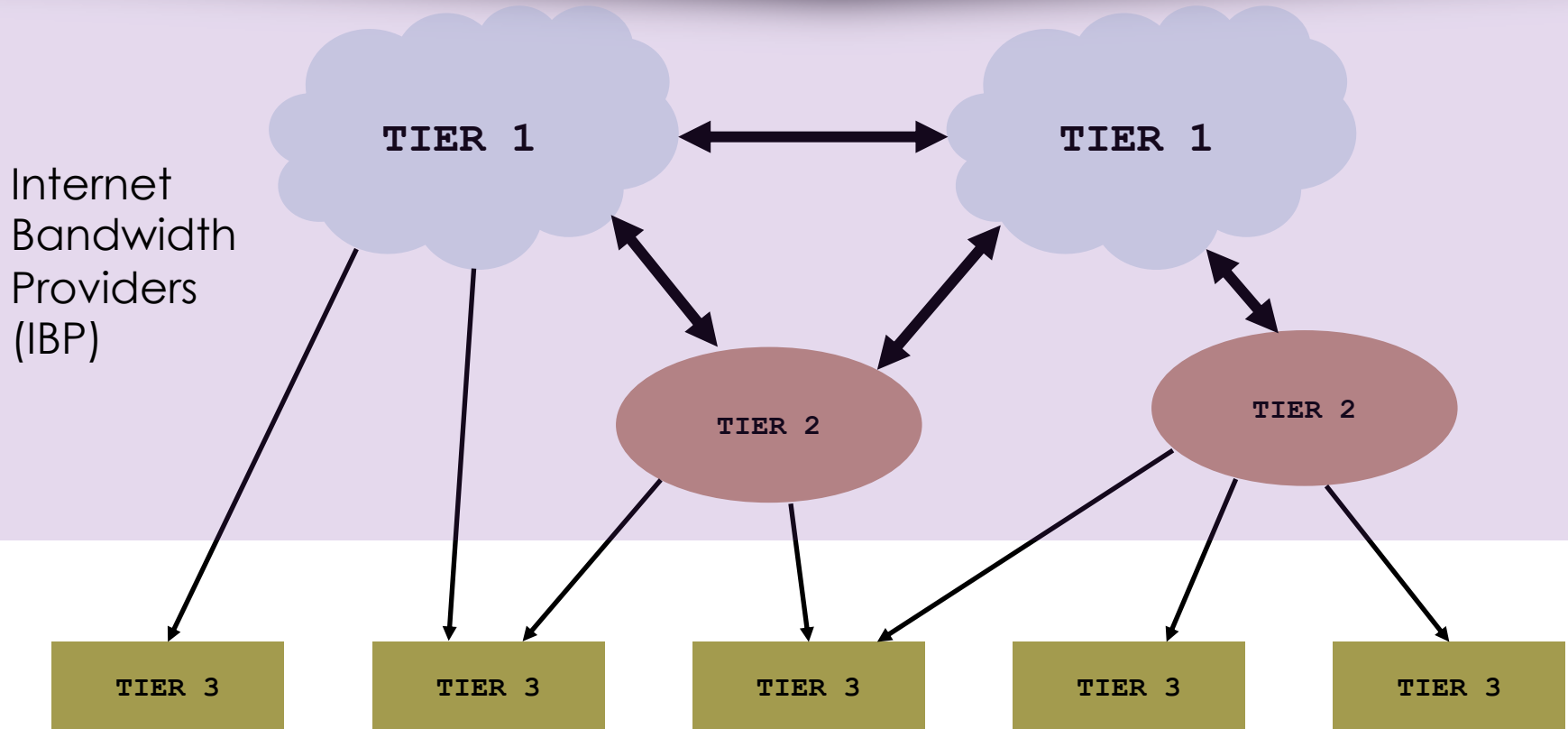


The Internet backbone

Internet Transit Operators (tiers 1)

Some tiers 1	Some key elements
AT&T	<ul style="list-style-type: none">✓ Own portions and/or take part in the construction of the internet backbone (submarine cable, satellites, etc.)✓ Can reach every IP network without paying transit or peering charges.✓ No authority to dictate rules.
CenturyLink	
Deutsche Telekom Global Carrier	
Orange (OpenTransit)	
Liberty Global	
PCCW Global	
Tata Communications	

Internet Service providers: Tier 1, Tier 2 & Tier 3



Internet Service Providers (tiers 2 & 3)

- Pay to access the Internet backbone
- Pay for the bandwidth
- Pay for their Internet number resources fees (IPv4, IPv6, ASNs)
- Must comply with regulators' policies

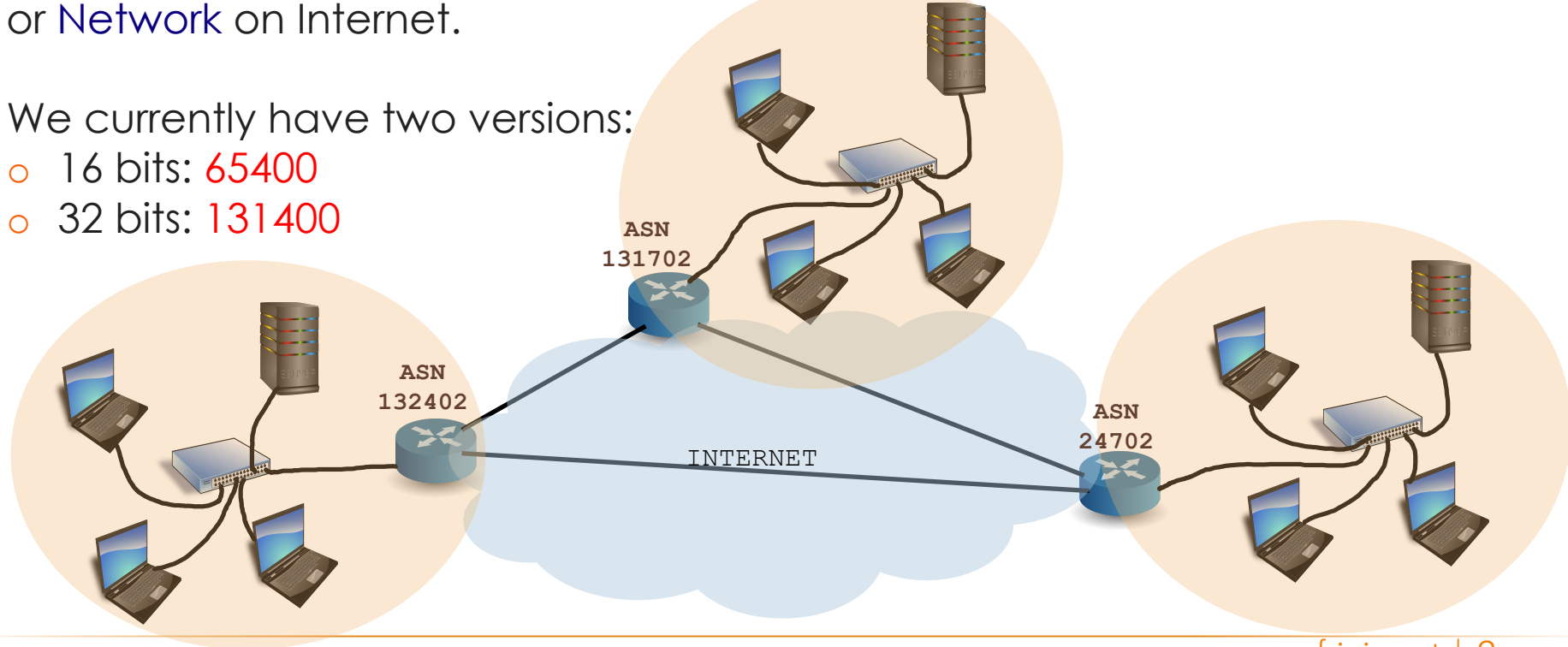
All these charges are borne by their customers

Internet Numbered Resources: ASNs

An autonomous system number (ASN) identifies each autonomous system or **Network** on Internet.

We currently have two versions:

- 16 bits: **65400**
- 32 bits: **131400**

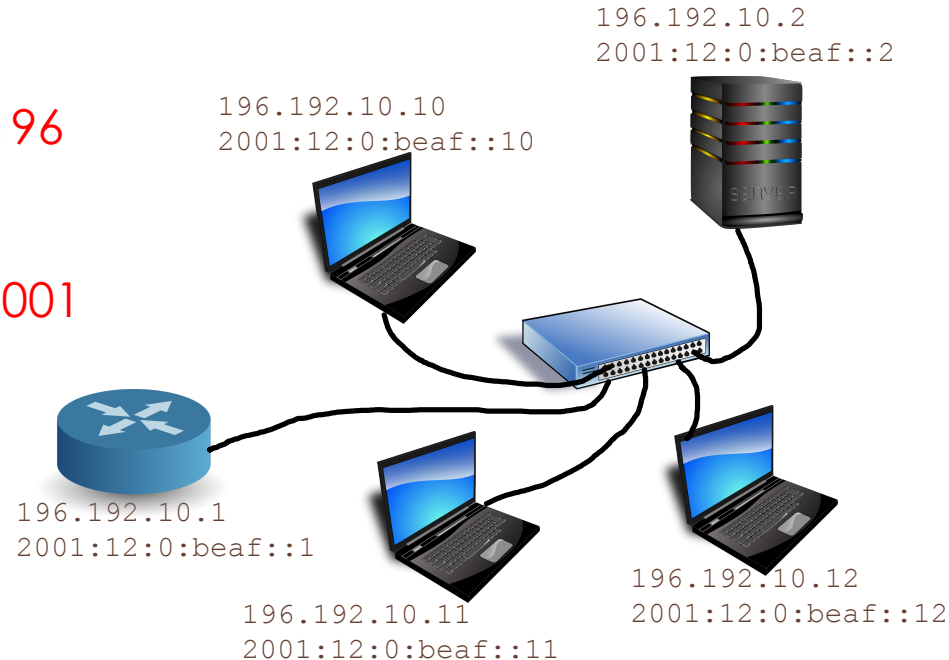


Internet Numbered Resources: IPv4 & IPv6

An IP address is a numerical label assigned to each device connected to a [computer network](#) that uses the [Internet Protocol](#) for communication.

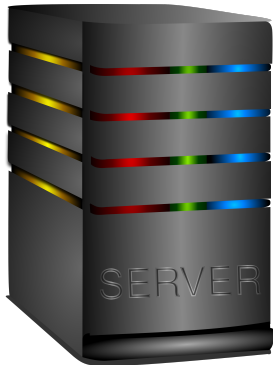
We currently have two versions:

- IPv4 coded with 32 bits: **196.196.196.196**
- IPv6 coded with 128 bits: **2001:0db8:c001:baba:2222:fefe:abcd:0001**

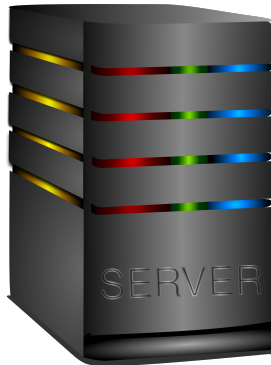


The Domain Name System (DNS)

The DNS maps a name to an IPv4 and or IPv6 address. Then instead of use numbers we are using name to connect a device or a server:



196.216.2.6
2001:42d0:0:200::6
www.afrinic.net

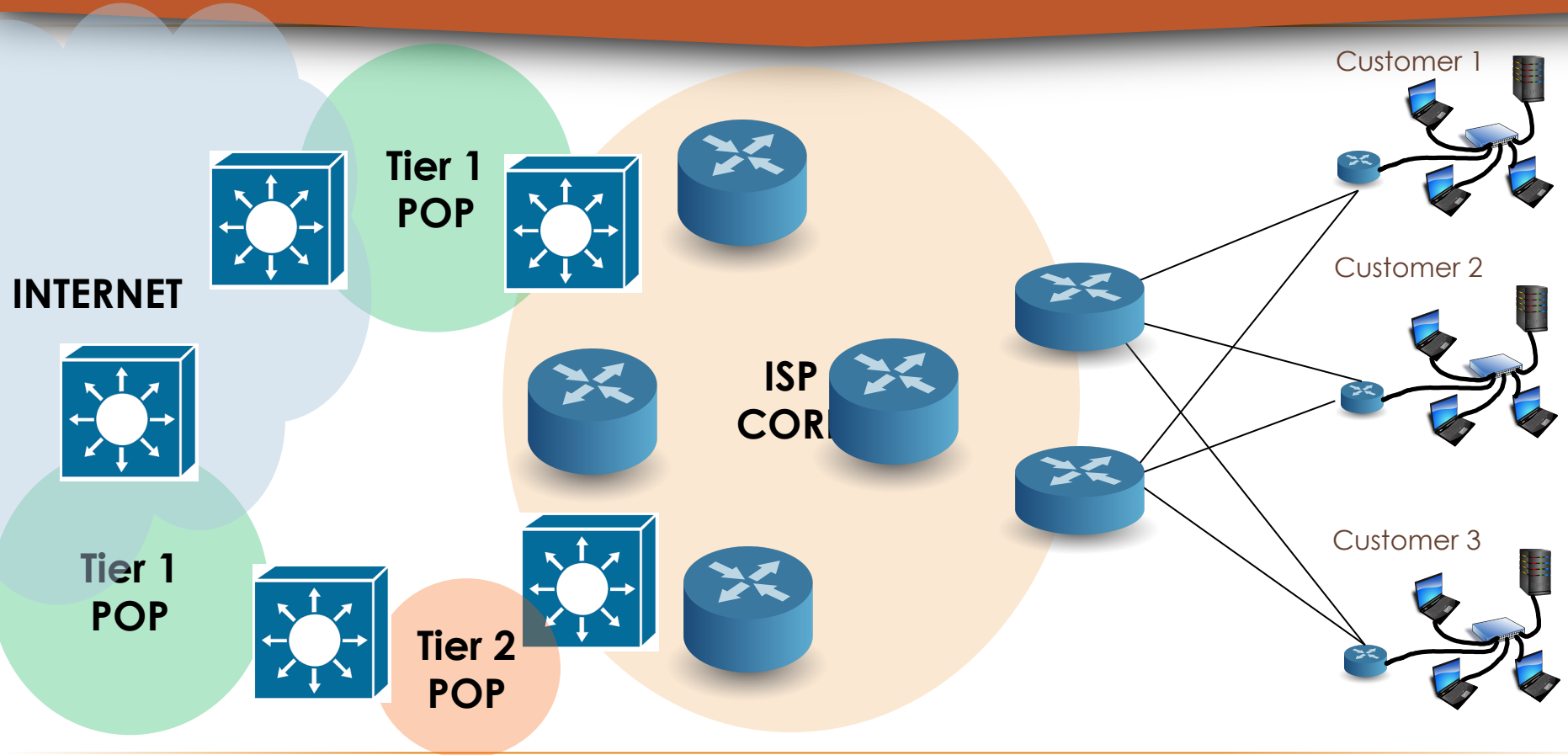


157.240.1.18
2a03:2880:f029:11:face:b00c::2
www.facebook.com



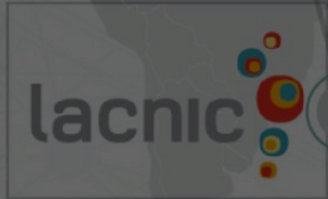
213.150.196.36
www.waigf.org

My Internet at home



AFRINIC 101

- Outline AFRINIC's role in managing the Internet
- List the various services AFRINIC provides
- Explain the role of the AFRINIC Community



AFRINIC Service Region

**5th
RIR**

**NOT for
profit**

**55
Economies**

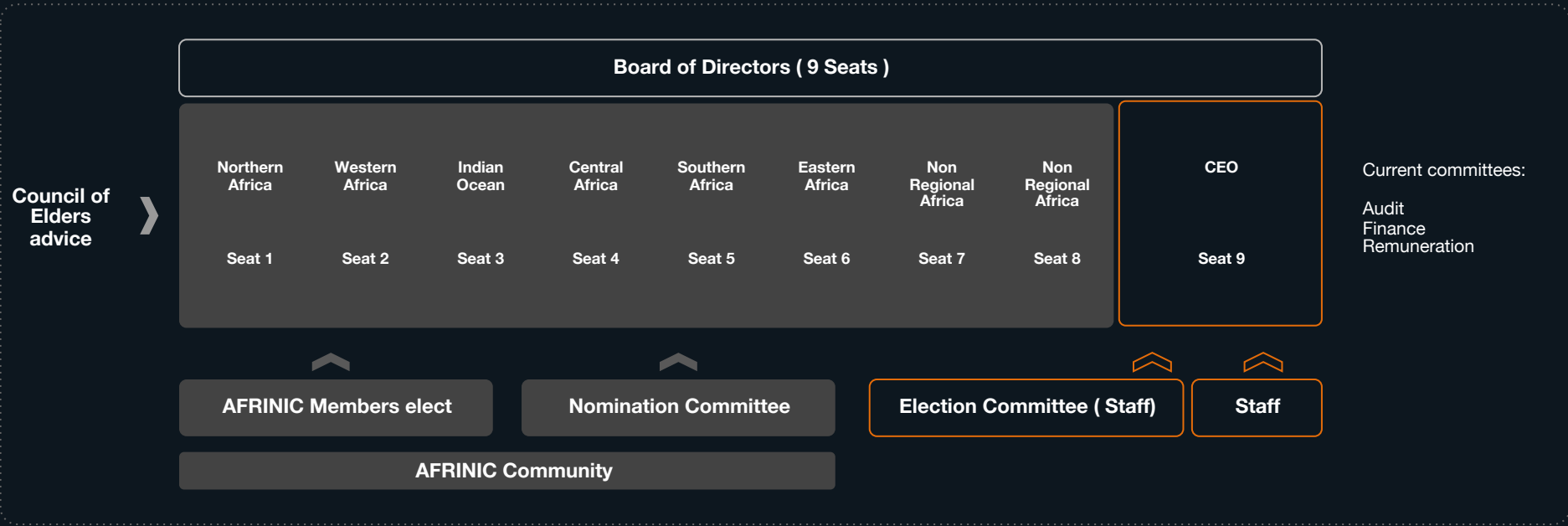
**Operating
since 2005**

**54
Staff**

**+2150
Resource
members**



AFRINIC GOVERNANCE



**AFRINIC
Bylaws
(Constitution)**

Governance Committee advises
the AFRINIC Board, AFRINIC Membership, and the community,
on matters of corporate governance

AFRINIC Membership

	Resource Members	Registered Members	Associate members
Must be a legal entity	✓	✗	✗
Sign contract with AFRINIC Ltd	✓	✓	✓
Use numbered resources from AFRINIC	✓	✗	✗
Pay annual membership fee	✓	✗	✓
Elect board of directors	✓	✓	✗
Observer at AGMM	✓	✓	✓

The AFRINIC Community

- Individuals from member or non member organisation
- Not a legal entity
- No contract with AFRINIC Ltd
- Work via mailing lists
- Deliberate resource policy




AFRINIC Community Meeting

AFRINIC meetings are forums where the tech community, policymakers, governments, and Internet users meet to share know-how and discuss policies for the Internet betterment in our service region.

Held at least 1 per year and include :

- Annual General Members' Meeting (AGMM)
- Not a legal Public Policy Meeting

AFRINIC public mailing lists

- Announcements (announce@afnic.net)
- Policy Discussions (rpd@afnic.net)
- IPv6 in Africa (afripv6-discuss@afnic.net)
- AfrICANN (africann@afnic.net)
- Community discussion (community-discuss@afnic.net)
- **Member discussion** (members-discuss@afnic.net) 

<http://www.afnic.net/en/community/email-a-mailing-lists>

AFRINIC's Contacts

Postal Address

African Network Information Centre (AFRINIC)
11th Floor, Standard Chartered Tower
72201, Cybercity Ebène
Republic of Mauritius



Contact Numbers

Tel +230 403 51 00
Fax +230 466 67 58



General Enquiry

contact [at] afrinic dot net



Service Support

service-support [at] afrinic dot net





Services to Members

- WHOIS Services
- Routing Security

SERVICES

- WHOIS & RDAP
- Internet Routing Registry (IRR)
- Resource Public Key Infrastructure (RPKI)
- Reverse DNS & DNSSEC
- Capacity Building - e-learning platform,
Pv6 Helpdesk & Webinars



Services to
the
Community

- Internet Development Program - IDP
- Capacity Building

AFRINIC Internet Development Programs?

6 Programs

1. Technical Community Development Program
2. Fellowship Program
3. Research and Collaboration Program
4. Diversity in ICT Program
5. African IGF & ICT Initiatives Development Program
6. Critical Infrastructure Development Program



1. Technical Community Development Program



At AFRINIC we believe that developing technical communities, is an integral part of developing the Internet on the continent.

These Technical groups promote Internet infrastructure stability, security, and network coherence, and facilitate better Internet accessibility for the community

We have already partnered with + 15 Regional and National technical communities groups through providing financial, technical and in-kind resources to facilitate their growth and skills development.

2. Fellowship Program



AFRINIC offers opportunities to individuals from diverse backgrounds to participate in and learn from the AFRINIC's meetings. The selected candidates become part of the crop of potential future leaders in the Internet ecosystem.

Over the past 6 years, AFRINIC has sponsored 230 fellows from 50 African countries to attend its meetings organised in Africa.

AFRINIC aims to provide opportunities to more prospective individuals to contribute in the awareness of the AFRINIC's initiatives on the continent.

3. Research and Collaboration Program



AFRINIC collaborates with educational institutions to conduct technical and policy-based research in our Service region.

Moreover we support research that helps network operators and end-users to take appropriate decisions and better address Internet challenges they are facing in Africa.

So far AFRINIC has funded at least 10 projects with Universities in Africa through sponsorship, skills development, and partnership.

4. Diversity in ICT Program



Despite Africa encountering rapid growth in Internet usage, women, girls, and people with disabilities are vastly underrepresented in ICT initiatives on the continent.

AFRINIC's Diversity Programme aims to bridge the digital divide and leverage the capabilities of people to access, use and develop Internet technologies.

AFRINIC has collaborated with +20 local initiatives on to advocate for more diversity in Internet usage on the continent.

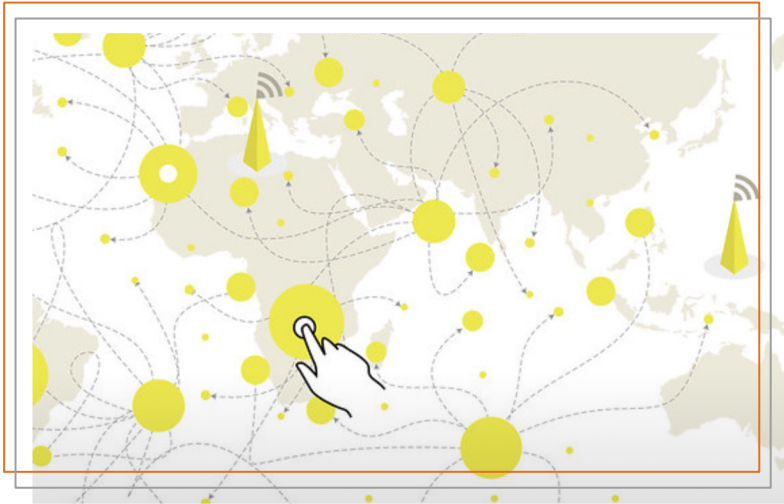
5. African IGF & ICT Initiatives Dev. Program



Over the last 10 years, the Internet has played a major role in the growth and prosperity in areas of education, health, public services on the continent. To ensure sustainable growth of a stable, secure, and robust Internet in Africa, AFRINIC's Internet Governance and ICT development program aims to leverage the skills and experiences of our stakeholders in Internet Governance, necessary to take an active part in global internet governance discussions.

AFRINIC has funded more than 100 national and regional Internet Governance Forums and other Internet conference on the continent where we pledged for an open and inclusive dialogue between Internet stakeholders.

6. Critical Infrastructure Development Program



Keeping its vision of a secure and accessible Internet for sustainable digital growth in Africa, AFRINIC has put the development of critical Internet Infrastructure at the center of its initiatives.

Through its Critical Infrastructure Development Programme, AFRINIC has provided equipments and financial support to more than 20 Internet critical infrastructures on the continent to accelerate universal and affordable access to Internet.

Capacity Building 1/2

- elearning - Master how to implement IPv6 technologies academy.afrinic.net
- certi::6 , Prove your IPv6 skills with our IPv6 certification program <https://certi6.io>
- webinars , video training to the community so that they can build skills without travelling <http://bit.ly/AfrinicWebinar>



Capacity Building 2/2

- DO helpdesk to remotely assist resource members to confidently advance IPv6 and RPKI deployment in their networks
<http://bit.ly/6deployEN>
- (e)deployathon to Provide remote guidance to confidently deploy IPv6 and RPKI.

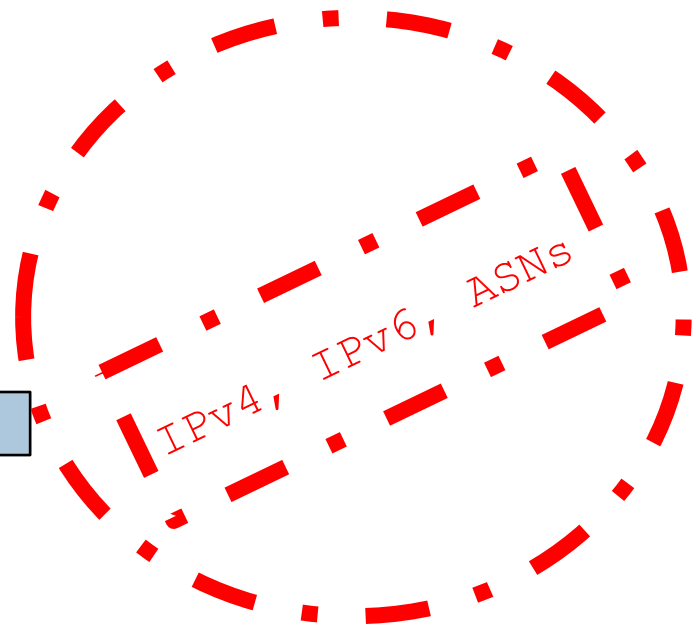
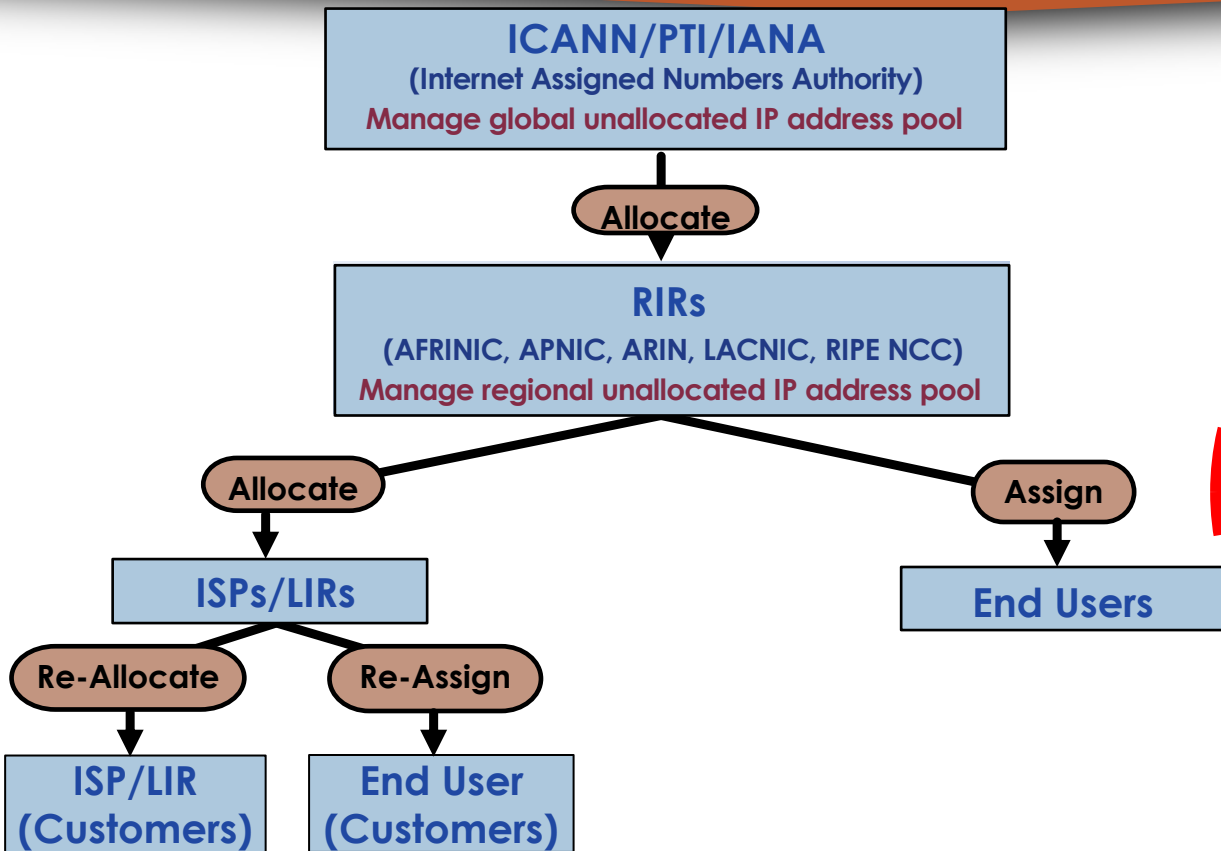




Resource Update

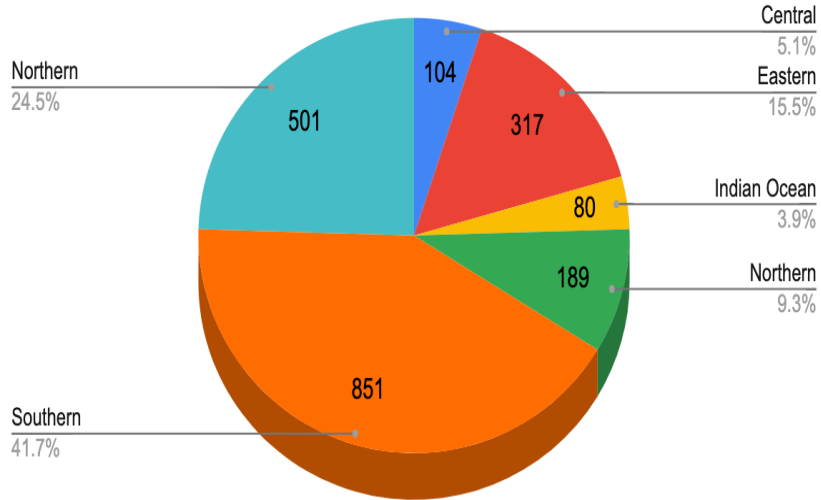
- AFRINIC Membership
- IP numbers Allocated

How Are IP Addresses Issued?

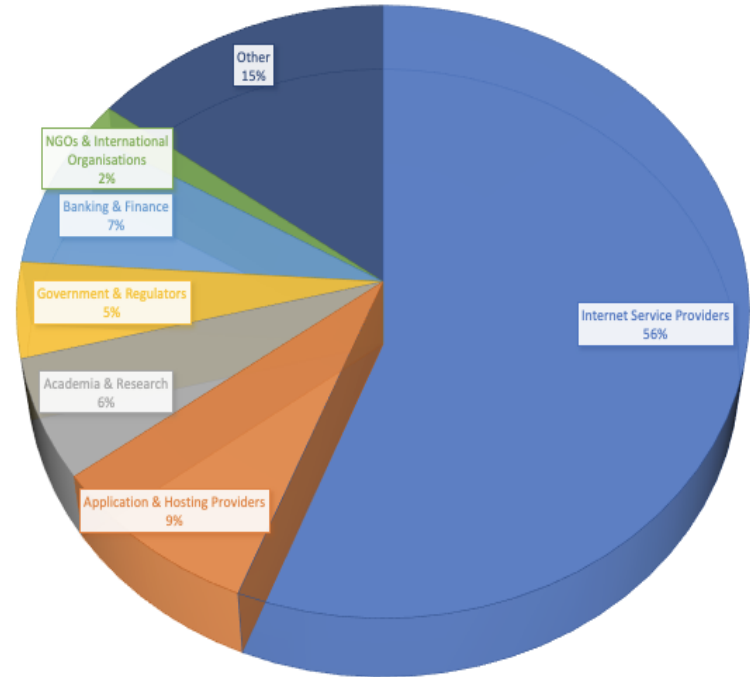


2158 Members

Members by Region



MEMBERS BY CATEGORY



How to Become Member

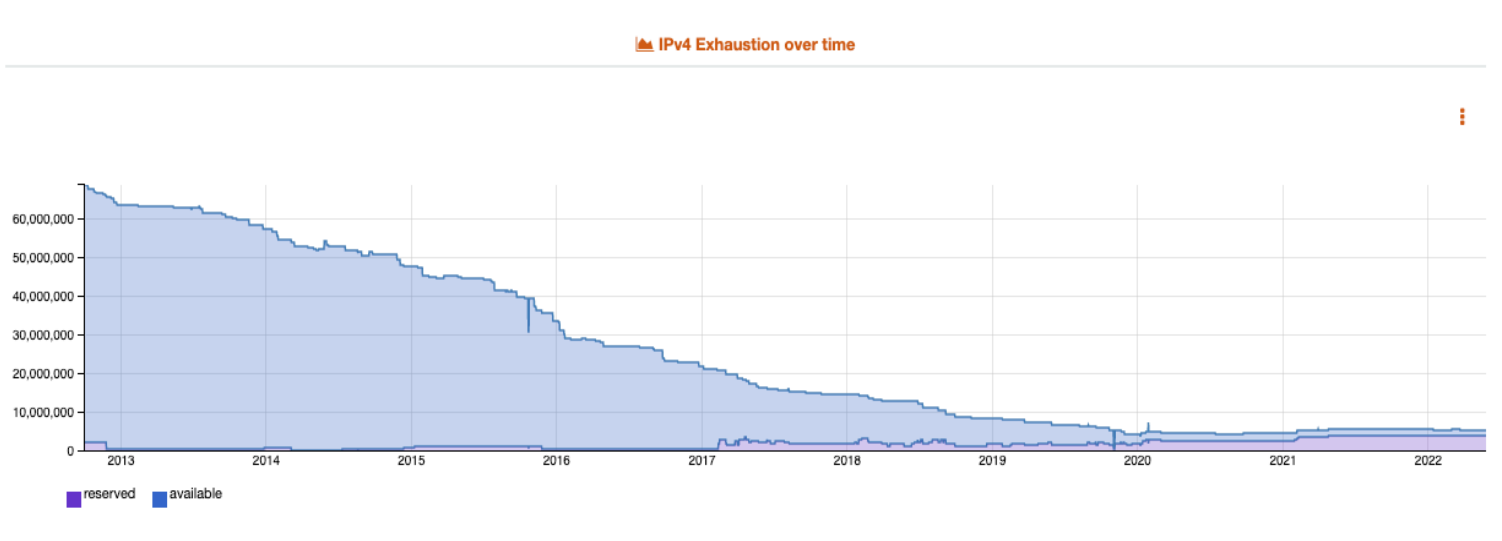
Becoming a Resource Member

- Eligibility: <https://afrinic.net/become-member#eligibility>
- Understand Policies: <https://afrinic.net/policy>
- Fees: <https://afrinic.net/membership/cost>
- Initiate Membership Requests: <https://nmp.afrinic.net/>

IPv4 Number Resources

IPv4 Depletion Over Time

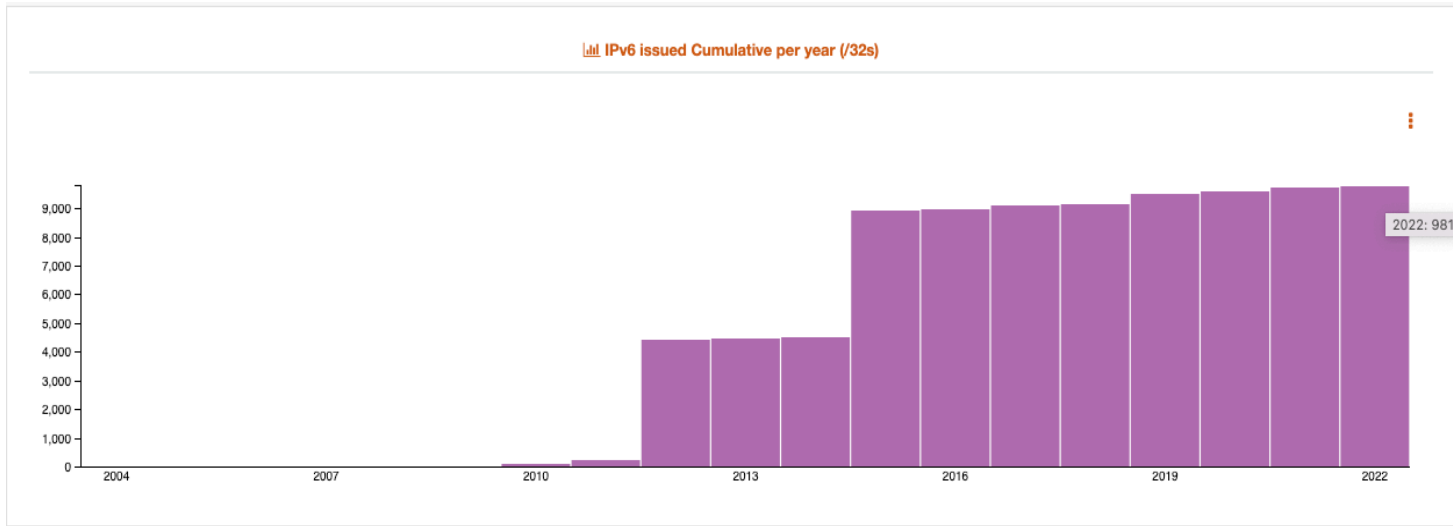
Total IPv4 issued to date: 452,289 /24s



IPv6 Number Resources

IPv6 Allocations over time

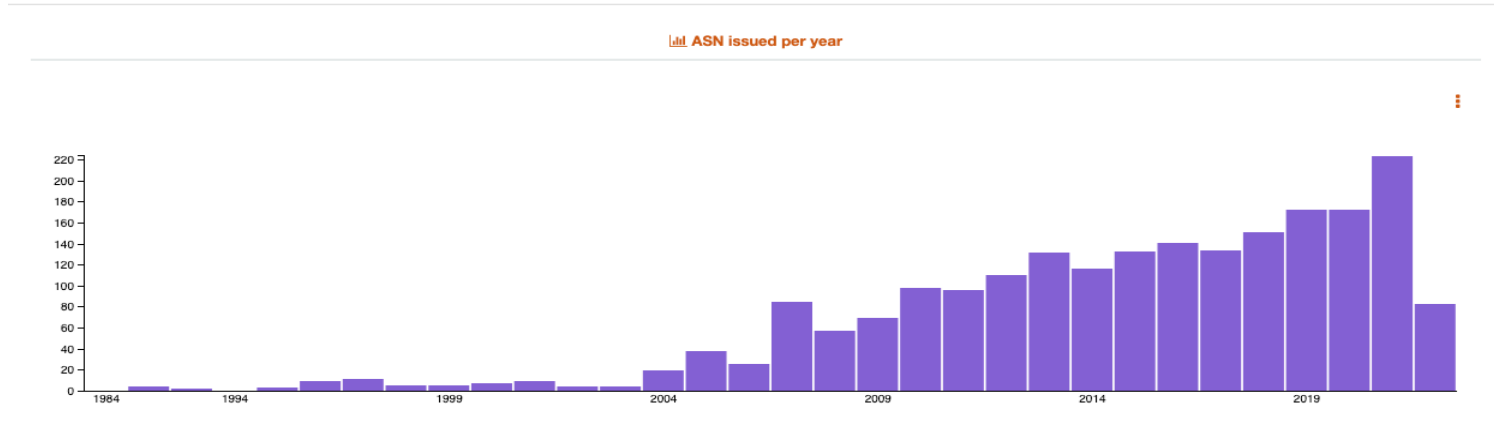
Total IPv6 issued to date: 10 221 /32s



ASN Resources

ASN Assignments over Time

Total ASN issued to date: 2,335



AGENDA

AFRINIC PDP

Participation in PDP

Draft Policy Proposals



Policy
Develop.
Process

- AFRINIC Membership
- IP numbers Allocated

Why should you care?

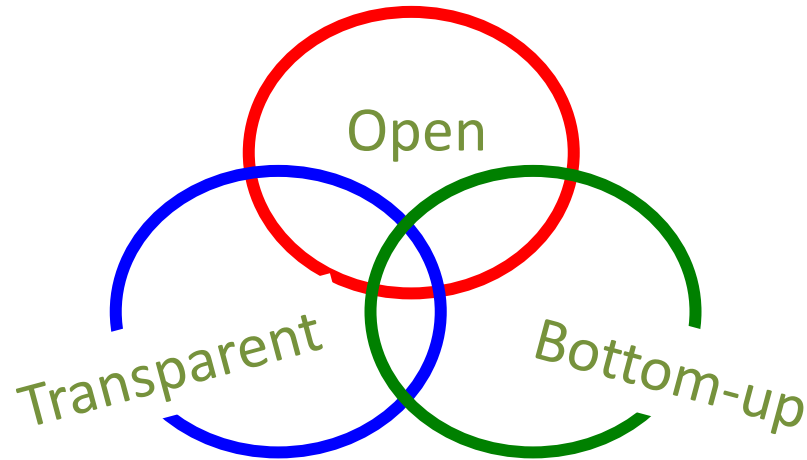
- Public IP Number Resources are The Internet
- An essential part of people's lives.
- Now a basic human need/right
- In the RIR system, the community decides on how these resources are managed
- Participate & help us better manage resources, for Africa.

Number Resources Management Policies

- Guideline by which AFRINIC Ltd manages resources
 - Guidelines for the services offered by AFRINIC around these resources
 - Developed by the AFRINIC Community
 - Developed through the Policy Development Process
-

Policy Development Process

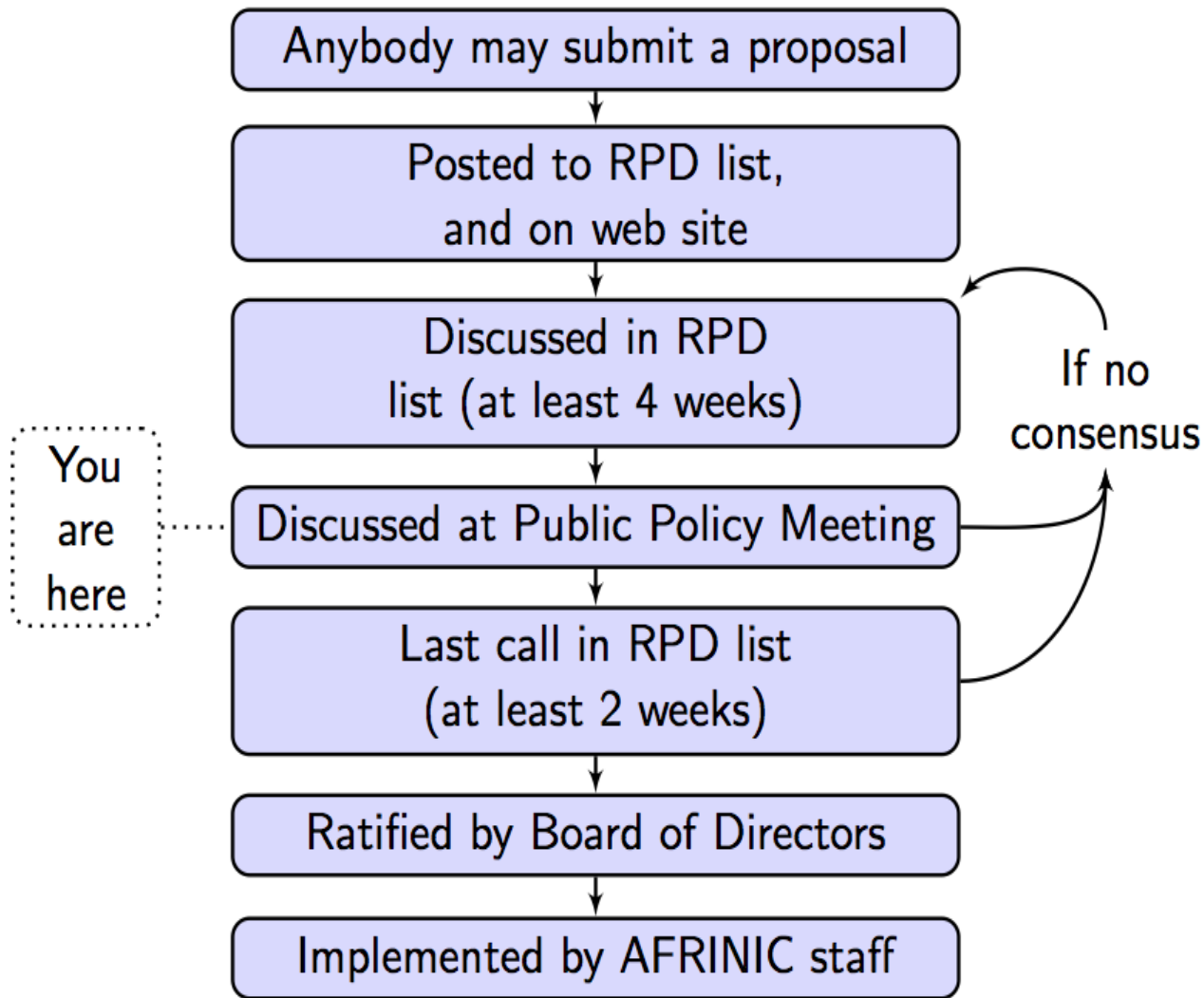
----The set of steps by which the African Internet community proposes, deliberates and adopts the policies that guide the use of number resources in the AFRINIC service region----



PDP principles

- **Openness:**
 - Policy development happens in an open forum
 - Anyone can participate.
- **Transparency:**
 - Everything documented, publicly available.
- **Fairness:**
 - Goal of all discussions is to ensure fair distribution of resources.

The PDP simplified:



AFRINIC Consolidated Policy Manual

All ratified policies are documented in the AFRINIC Policy manual

<https://www.afrinic.net/policy/manual>

The manual is updated once new policies are ratified and implemented

Coordination

- The “PDWG” – is composed of anyone that is involved in discussing a policy proposal.
- It is chaired by 2 co-chairs (Volunteers)– currently:
 - **Vincent Ngundi (Kenya)**
 - **Darwin Da Costa (Angola)**
- Supported by AFRINIC (secretariat duties).

How to participate

- Interest in how AFRINIC manages its resources
- Understand English and French (most of the discussions are in English)
- Email address & Internet access
- Adhere to the Code of Conduct
- Register to RPD mailing list <https://lists.afrinic.net/mailman/listinfo/rpd>
- Look up the proposals on AFRINIC <https://afrinic.net/policy/proposals>

How to participate

consult the rpd archives to acquaint with the discussions on these proposals

← → ↻ lists.afrinic.net/pipermail/rpd/

AfriNIC RPD List

Search RPD Archives

Limit search to: Subject & Body Subject Author
Sort by: ▾

Archive	View by:	Downloadable version
2021:	[Thread] [Subject] [Author] [Date]	[Gzip'd Text 1 MB]
2020:	[Thread] [Subject] [Author] [Date]	[Gzip'd Text 4 MB]
2019:	[Thread] [Subject] [Author] [Date]	[Gzip'd Text 1 MB]

THANK
YOU!



Questions?



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[youtube.com/ afrinic](https://www.youtube.com/afrinic) media



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